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Engineering Dept.,  
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( 2 Pages ) Page #1.  
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METHOD OF OPERATION  
TRUNK CIRCUIT

To Final Multiple - Key Ended - Special -Outgoing Trunk Test Board - Chief Switchman's Desk - Machine Switching System -

SOUTHWESTERN BELL TELEPHONE COMPANY

GENERAL DESCRIPTION

1. This circuit is arranged for two way service from the outgoing trunk test board or the chief switchman's desk. It is arranged for charging the calling subscriber on all incoming calls.

DETAILED DESCRIPTION

OPERATION

2. The key in figures #1 and #2 differs from the standard type keys, in that the talking position is intermediate to the normal and holding positions. It is adjusted so that when the key is restored to normal, the contacts connected to the T and R leads break before the contacts connected to the T1 and R1 leads break. This prevents the desk attendant from receiving a click in the ear, when the key is restored to normal.

3. On an outward call, the key at either the chief switchman's desk or at the outgoing trunk test board is operated to the talking position, bridging a retardation coil in the telephone circuit across the T1 and R1 leads, and operating the E241 relay. The operation of this relay disconnects the 550 ohm winding of the B136 relay from the tip and ring leads of the trunk. The dial in the telephone circuit is then operated, sending out the proper impulses. When the key is restored to normal the E241 relay releases and the circuit is restored to normal.

4. On an incoming call the B136 relay operates on ringing current through its 550 ohm winding in series with the l m.f. condenser, and locks through its 475 ohm winding from ground through the break contact of the E241 relay. The operation of the B136 relay closes a circuit to light the trunk lamps. When the key is operated to the talking position in answer to the call, the E241 relay operates. The E241 relay operated cuts off the line winding of the B136 relay and the condenser from the tip and ring leads of the trunk and releases the B136 relay thereby extinguishing the trunk lamps. When the key is restored to normal the E241 relay releases which functions as previously described.

5. When the key is operated to the holding position, the line winding of the B136 relay is used as a holding bridge.

( 2 Pages) Page #2.  
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CIRCUIT REQUIREMENTS

OPERATE

NON OPERATE

RELEASE

B136 (L) Inner  
wdg. (550 ohms) Test .013 amp.  
Readj. .012 amp.

Test .0042 amp.  
Readj. .0045 amp.

Outer wdg.  
(475 ohms) Test .020 amp.

E241  
(CO) Test .025 amp.  
Readj. .012 amp.

Test .0085 amp.  
Readj. .009 amp.

ENG.--W.H.L.

CHK'D.--FAB.

10-4-21.

APPROVED C. L. SLUYTER, G. M. L.